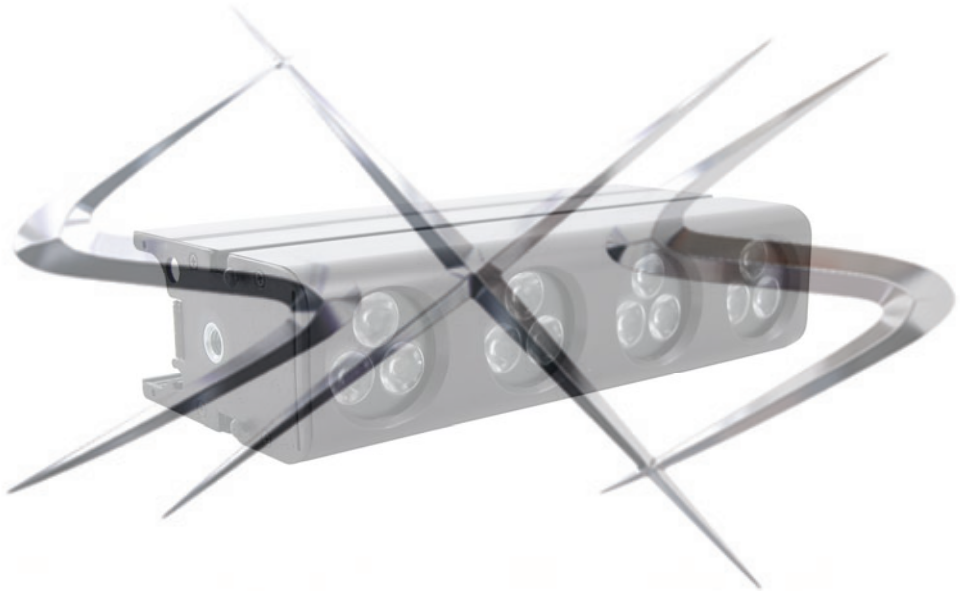
vent production hire and audio visual services
www.sxevents.co.uk info@sxevents.co.uk

Chroma-Q

Color Block DB4

User Manual



Version 1.1 December 2006

PN: 602-0500

www.sxevents.co.uk

vent products hired from SX Visual Services
www.sxevents.co.uk
Phone: 0870 080 2142
email: enquiries@sxevents.co.uk

Disclaimer

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that A.C. Lighting products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent. A.C. Lighting sole warranty is that the product will meet the sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

A.C. Lighting reserves the right to change or make alteration to devices and their functionality without notice due to our on going research and development.

The Color Block DB4 has been designed specifically for the professional entertainment lighting industry. Regular maintenance should be performed to ensure that the products perform well in the entertainment environment.

If you experience any difficulties with any Chroma-Q products please contact your selling dealer. If your selling dealer is unable to help please contact support@aclighting.com. If the selling dealer is unable to satisfy your servicing needs, please contact the following, for full factory service:

Outside North America:
A.C. Lighting Ltd.
Centauri House
Hillbottom Road,
High Wycombe,
Buckinghamshire,
HP12 4HQ.
United Kingdom
Tel: +44 (0)1494 446000
Fax: +44 (0)1494 461024

North America:
A.C. Lighting Inc.
Unit #1
435 Horner Avenue,
Toronto,
ON.
M8W 4W3
Canada
Tel: 416-255-9494
Fax: 416-255-3514

For further information please visit the A.C. Lighting website at www.aclighting.com.

Chroma-Q is a trademark of A.C. Lighting Ltd.

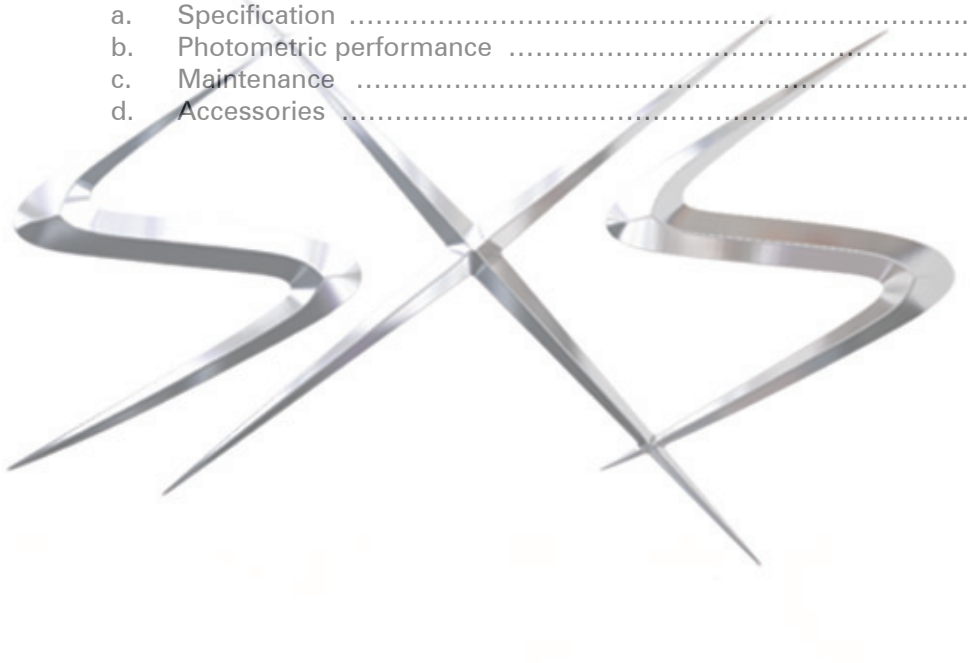
The rights and ownership of all trademarks are recognised.

www.sxevents.co.uk

vent productsPhone 0870 780 2142
www.sxeventsemail: sales@sxevents.co.uk

1. Product Overview **3**

2. Operation **3**
2.1 Cabling 3
2.2 Fixings 4
a. Integrated connection system 4
b. Batten bracket kit for up to five fixtures 5
c. Yoke kit for single fixture 5
d. Blinder frame for four fixtures 5
e. Hinge kit 6
f. Wall bracket for single fixture 6
2.3 Control 6
a. HSI v RGB 6
b. Internal FX engine 7
2.4 Technical Information 7
a. Specification 7
b. Photometric performance 7
c. Maintenance 8
d. Accessories 8



www.sxsevents.co.uk

vent product Phone 0870 080 2142
www.sxsevents.com sales@sxsevents.co.uk

The Color Block DB4 lighting fixture is designed specifically for professional entertainment lighting. The fixture's modular design and comprehensive range of fixing options allows users to easily create a complete LED system using stock of just one generic fixture type - including battens, blinders, truss toners and various mounting configurations using the built in fixings.

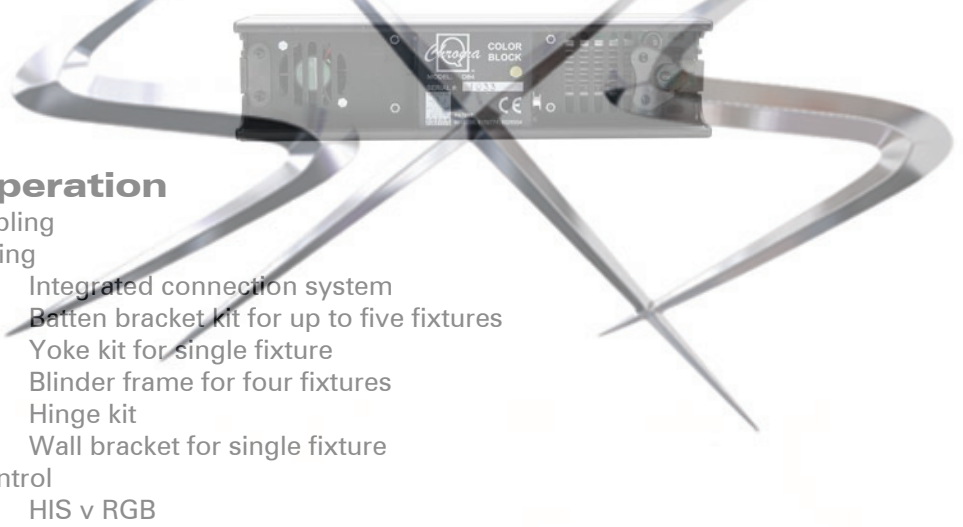
Each Color Block DB4 fixture features four sets of three high output LEDs which produce an intense, powerful light and vibrant colours across the spectrum.

A range of optical accessories are available to increase the flexibility of the fixture. From beam angle adjustment for projection to Pixel Caps and Light Pipe to create stunning visual effects.

Designed to be intelligent both inside and out, the modular blocks incorporate the latest Hue, Saturation and Intensity (HSI) control as well as RGB, and Variable Effects Engine software which gives the lighting designer full control over colour and effects combinations.

The product's lightweight yet robust, heavy gauge aluminium extruded construction houses a discreet cable management system and additional protection is built around the LED lenses for a truly road proof fixture.

A range of DMX controlled power supplies are available to accommodate most applications. Each Color Block Power Supply features XLR4 outputs with a maximum capacity of 5 Color Block fixtures daisy chained together. See separate PSU user manual for control details.



2. Operation

2.1 Cabling
2.2 Fixing
- a. Integrated connection system
- b. Batten bracket kit for up to five fixtures
- c. Yoke kit for single fixture
- d. Blinder frame for four fixtures
- e. Hinge kit
- f. Wall bracket for single fixture

2.3 Control
- a. HIS v RGB
- b. Internal FX engine

2.4 Technical information
- a. Specification
- b. Photometric performance
- c. Maintenance
- d. Accessories

2.1 Cabling

The Color Block utilises an XLR 4-pin cable system. This is used to supply power and control data. Pin 1 = 0VDC, pin 2 = control minus, pin 3 = control plus, pin 4 = +48VDC. The chassis should be ground bonded.

Only genuine Tourflex Datasafe cable is recommended for use with the Color Block system. Damage will occur if power connections short-circuit to data or ground shield connections. When assembling XLR4-pin cables, heat shrink should be used on each individual data pin and the drain wire to prevent short circuits.

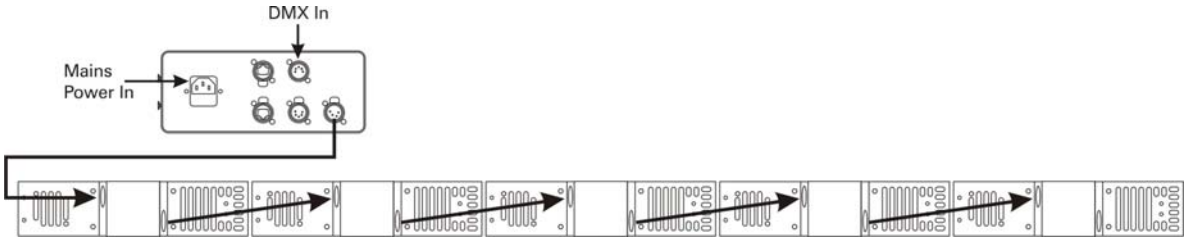
The Color Block power supplies deliver power and data via XLR4. A maximum of five daisy-

www.sxsevents.co.uk

vent production hire and sales Phone 0870 080 2142
www.sxevents.co.uk info@sxevents.co.uk

chained Color Block DB4 fixtures can be connected to one cable. Return lines are not required. The total cable length of each chain must not exceed 60 meters (200ft).

It is recommended that a maximum 20m XLR4 cable length separates adjacent units as this can cause signal deterioration.



Note: Maximum of 5 Color Block fixtures per cable. No return cables required.

2.2 Fixings

One of the strengths of the Color Block fixture is it's flexible fixing possibilities. The Color Block fixture is supplied with an integral M10 clinch nuts at each end. These can be used to attach the Color Block fixture to a standard hook clamp or the wide range of Color Block below.

Note: damage may occur if the bolt is too long. In addition both sides of the fixture feature a fixing slot designed to accept an M6 bold head.

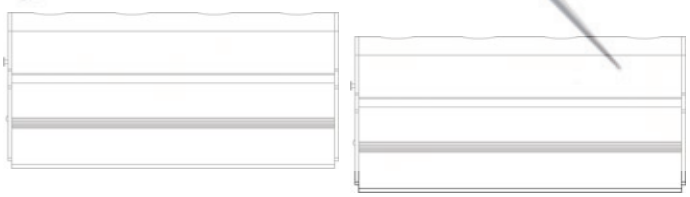
The Color Block fixture also features an integral connection system to enable up to five units to be locked together as a batten (see below).

Note: it is important to ensure that each fixture is also secured with a safety bond. The end plate of each fixture has a fixing hold to facilitate secondary fixings.

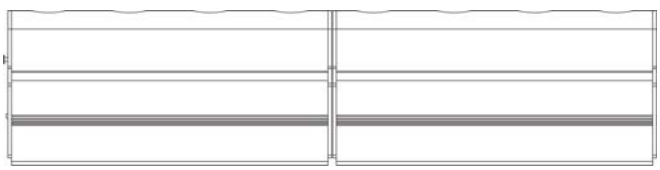
a. Integrated connection system

One end of the Color Block fixture features two protruding locating pins and a catch plate, the other end has two keyhole slots and a butterfly latch.

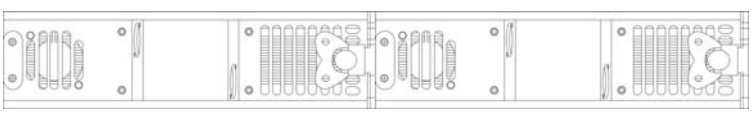
1. To connect two fixtures together, firstly mate the two protruding pins from one fixture into the keyhole slots of the other.



2. Then slide the fixtures together so that they are aligned correctly, taking care to get past the extended catch plate.
   Note: This will be stiff on new fixtures and a twisting action may ease assembly.



3. Finally use the butterfly latch to secure the fixtures together tightly (maximum 5 units together).



www.sxevents.co.uk

vent product Phone 0870 080 2142
sold by Email sales@sxsevents.co.uk
www.sxsevents.co.uk

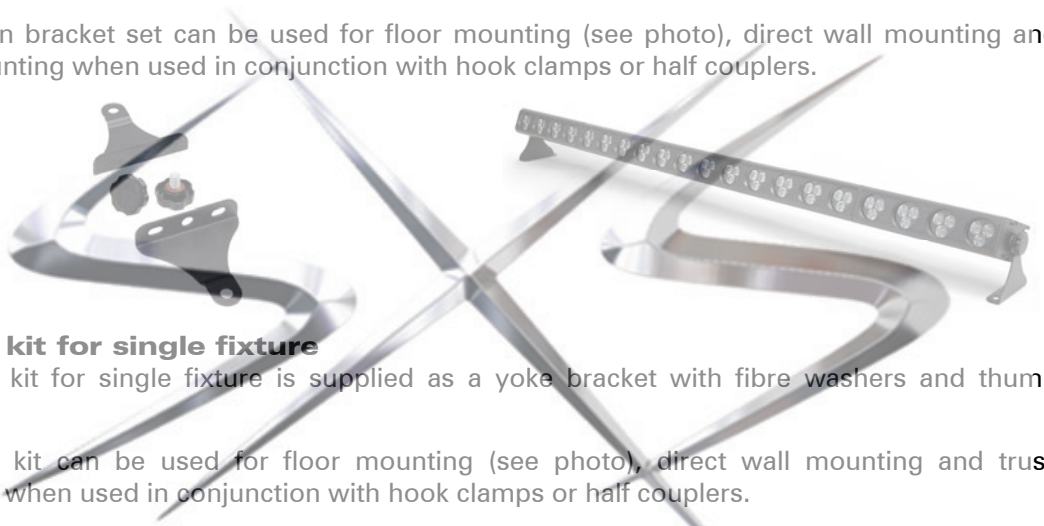
Note: It is important to ensure adequate ventilation to the rear of all Color Block fixtures. Never place the fixtures directly on the floor pointing upwards when configured as a batten.

The Color Block fixture is supplied with an integral M10 clinch nuts at each end. These can be used to attach the Color Block fixture to a standard hook clamp.
Note: damage may occur if the bolt is too long.

b. Batten bracket kit for up to five fixtures

The batten bracket set is supplied as a pair of brackets with fibre washers and thumb wheels.

The batten bracket set can be used for floor mounting (see photo), direct wall mounting and truss mounting when used in conjunction with hook clamps or half couplers.



c. Yoke kit for single fixture

The yoke kit for single fixture is supplied as a yoke bracket with fibre washers and thumb wheels.

The yoke kit can be used for floor mounting (see photo), direct wall mounting and truss mounting when used in conjunction with hook clamps or half couplers.

d. Blinder frame for four fixtures

The blinder frame is supplied as a yoke bracket, side plates, fibre washers, thumb wheels and eight M10 bolts.

The blinder frame is designed to truss mount with use of a half coupler.

The end plates feature two complete sets of fixture fixing holes. Set one hold the fixtures closely together ensuring equal centres for all sixteen cells. Sets two are adjustable and allow the Color Block fixtures to be splayed out at varying angles.

www.sxsevents.co.uk

vent production hire and sales Phone 0870 080 2142
www.sxevents.co.uk email enquiries@sxevents.co.uk

The hinge kit is supplied as one complete hinge with fibre washers and M10 bolts.

The hinge kit fits between two Color Block fixtures and offers an angle adjustment of 180 deg. If used in multiples, unique shapes can be achieved, such as hexagons, octagons etc.

f. Wall bracket for single fixture

The Wall bracket for single fixture is a discrete fixing suitable for fixing a single Color Block to a wall or set piece. Keyhole slots are provided to for vertical or horizontal fixing.

2.3 Control

The Color Block is controlled via an addressable ANSI E1.11 USITT DMX512-A power supply. The Color Block power supplies can be set to operate in various modes. We offer 3 grouping options (individual, block, all) with 3 control options on each (FX, HSI & RGB) see relevant power supply user manual for full details.

PSU-05	PSU-30
Mode 1 (67ch) - Cell grouped, 20 x HSI + FX	Mode 1 (367ch) - Cell grouped, 120 x HSI + FX
Mode 2 (60ch) - Cell grouped, 20 x HSI	Mode 2 (360ch) - Cell grouped, 120 x HSI
Mode 3 (60ch) - Cell grouped, 20 x RGB	Mode 3 (360ch) - Cell grouped, 120 x RGB
Mode 4 (21ch) - Block grouped, 5 x HSI + FX	Mode 4 (96ch) - Block grouped, 30 x HSI + FX
Mode 5 (15ch) - Block grouped, 5 x HSI	Mode 5 (90ch) - Block grouped, 30 x HSI
Mode 6 (15ch) - Block grouped, 5 x RGB	Mode 6 (90ch) - Block grouped, 30 x RGB
Mode 7 (9ch) - All grouped, HSI + FX	Mode 7 (9ch) - All grouped, HSI + FX
Mode 8 (3) - All grouped, HSI	Mode 8 (3) - All grouped, HSI
Mode 9 (3) - All grouped, RGB	Mode 9 (3) - All grouped, RGB

a. HSI v RGB

The Color Block has two methods of controlling colour and intensity:

3 channel HSI (Hue, Saturation and Intensity) gives 2 colour channels for hue and saturation and a separate intensity channel. A separate definable intensity channels is particularly useful when creating intensity chases or when the grand master is used. The hue channel has 255 different colours available and the saturation channel specifies the saturation level of that colour. The saturation channel is fully saturated at full. White is achieved with the intensity channel to full and the saturation channel at zero.

3 channel RGB (Red, Green and Blue) is the more traditional way of controlling colour changing LED fixtures. Each of the three control channels directly affects the intensity of the corresponding LED. Colour is mixed by adjusting the levels of the three primary colours. White is achieved with all channels at full.

www.sxevents.co.uk

vent products from SX Events 0870 080 2142 services
www.sxevents.co.uk

a. Internal FX engine

The Color Block PSUs feature a comprehensive internal FX engine with seven variable parameters to create an unlimited amount of unique lighting effects. The PSU User Manuals have a comprehensive section describing the functionality in detail. Here is a brief channel description for mode 1:

Ch1 - Grouping, variable grouping facility to run FX between / within groups
Ch2 - Colour Speed, variable speed of colour scrolling
Ch3 - Colour Fan, variable fan of colour between / within groups
Ch4 - Colour Range, variable limit of spectrum range for colour scrolling
Ch5 - Colour Step, variable control of smoothness of colour scrolling
Ch6 - Intensity Effects, wide selection of intensity fading and snapping effects
Ch7 - Intensity Fan, variable fan of intensity effects

All internal FX are referenced back to the group base HSI colour and intensity levels.

2.4 Technical

a. Specifications

Product Code:	CHCB4
Dimensions (without fixings):	250mm × 62mm × 117mm 9.8" × 2.4" × 4.6"
Weight:	1.4kg / 3.1lbs
Connectors:	XLR4
Body colour:	Black anodised
LED heads:	4 × 3 RGB
Lamp life:	Up to 25,000 hours
Beam dispersion:	14° (20°, 30° & 60×10% optional)
IP Rating:	IP20
Operating temperature:	0° C to + 40° C
Approvals:	EN55103-1, EN55103-2, IEC60950

LICENSED BY COLOR KINETICS
Color Kinetics & the Color Kinetic logo are registered trademarks of Color Kinetics Incorporated

Licensed By SUPER VISION INTERNATIONAL
Patent No. 4,962,687

CE

b. Photometric performance

Photometric data for colour white

	3'/1m	6'/2m	9'/3m	12'/4m	15'/5m
FC	276.0	84.5	39.6	22.1	14.0
Lux	2970.5	909.5	425.8	238.0	151.0

Photometric data for colour red

	3'/1m	6'/2m	9'/3m	12'/4m	15'/5m
FC	77.9	23.8	11.2	6.2	4.0
Lux	838.3	256.3	120.8	66.7	42.7

Photometric data for colour green

	3'/1m	6'/2m	9'/3m	12'/4m	15'/5m
FC	182.4	55.5	25.8	14.4	9.2
Lux	1963.3	597.8	277.3	155.0	98.9

Photometric data for colour blue

	3'/1m	6'/2m	9'/3m	12'/4m	15'/5m
FC	28.8	9.5	4.5	2.6	1.6
Lux	310.0	102.0	48.5	27.6	17.7

www.sxsevents.co.uk

vent production of Sx events Ltd 0870 080 2142
www.sxevents.co.uk

c. Maintenance

With care the Color Block DB4 will require little maintenance. However, as the unit is likely to be used in a stage environment we recommend periodical internal inspection and cleaning of any resulting dust and cracked oil residue.

If the Color Block DB4 requires cleaning, wipe with a mild detergent on a damp soft cloth. **Do not** spray liquids onto the enclosure.

d. Accessories

CHCBSY	Yoke attachment
CHCBB	Batten bracket kit for up to 5 DB4s
CHCBBF4	Blinder frame for 4 DB4s
CHCBC90	90° mitre corner
CHCBHP	Hinge kit
CHCBWB	Wall bracket for single DB4
CHCBLP250	250mm LED pipe
CHCBLP1300	1300mm LED pipe
CHCBPC	Set of 4 pixel caps and bracket for 1 DB4
CHCBBK20	20° beam kit for Color Block
CHCBBK30	30° beam kit for Color Block
CHCBBK6010	60 × 10° beam kit for Color Block
MUCX4-27	Single link cable for use in battens

Set of 4 pixel caps and bracket

The pixel caps are supplied in a set of 4 with a quick release mounting bracket. The caps blend and diffuse the RGB LED output of a single cell taking the resulting colour.

LED Pipe

The LED pipe is available in 250mm and 1300mm lengths and simply snaps into the fixing slots on the fixture body. The LED pipe blends and diffuses the RGB LED output of adjacent cells, taking the resulting colour. The LED pipe is particularly effective at linear colour chase effects.

www.sxevents.co.uk